



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/801,533	03/07/2001	Adisak Mekkittikul	LANT-004	7175
7590 09/16/2004			EXAMINER	
WAGNER, MURABITO & HAO LLP Two North Market Street, Third Floor San Jose, CA 95113			FERRIS, DERRICK W	
			ART UNIT	PAPER NUMBER
			2663	
DATE MAILED: 09/16/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/801,533

Applicant(s)

MEKKITTIKUL ET AL.

Examiner

Derrick W. Ferris

Art Unit

2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/18/2002.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 1-8, 10-18, and 20** are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,714,517 B1 to *Fawaz et al.* (“*Fawaz*”).

As to **claim 1**, see figures 13a and 13b where a first ring and a second ring are in reverse directions with respect to one another (i.e., clockwise/counter clockwise). Both rings transport packets. The figures also show ring nodes 102 as a plurality of nodes. Each of the ring nodes has a detector which detects a failure in a segment of either of the first or the second ring and performs a switch-over having detected a failed segment to another ring, see e.g., figure 13b and column 12, line 64 – column 13, line 50. In particular, a link failure is detected by not receiving a confirmation message from each node in the ring.

As to **claim 2**, in figure 13a node M-1 sends the message and thus performs the switchover meeting the limitation. Also note that each node chooses the shortest path to reach other nodes in the ring, see e.g., column 13, lines 20-38.

As to **claim 3**, see figure 13b where a loop-back is performed.

As to **claim 4**, the rings are bi-directional as shown in figure 13a.

As to **claim 5**, data packets are routed from one node to another node thus meeting the further limitation of on a “per-flow” basis.

As to **claim 6**, data packets are routed as a function of QoS and congestion, see e.g., column 11, lines 15-35 and column 13, lines 39-49. In particular, a check to determine if any bandwidth violations occur after a network reconfiguration.

As to **claim 7**, different degrees of protection are taught as part of a dual ring.

As to **claim 8**, the shortest path is chosen to the node, see e.g., column 13, lines 20-38.

As to **claim 10**, the ring nodes use buffering to prevent packet bleeding and in addition also use time stamps, see e.g., column 13, lines 50-67.

As to **claim 11**, see similar rejection to claim 1.

As to **claim 12**, see similar rejection to claim 2 where if a confirmation message is not received then the node switches the link.

As to **claim 13**, see similar rejection to claim 3.

As to **claim 14**, see similar rejection to claim 4.

As to **claim 15**, see similar rejection to claim 5.

As to **claim 16**, see similar rejection to claim 6.

As to **claim 17**, see similar rejection to claim 6.

As to **claim 18**, see similar rejection to claim 8.

As to **claim 20**, see similar rejection to claim 10.

3. **Claims 1-20** are rejected under 35 U.S.C. 102(b) as being anticipated by “A Fast Restoration System for ATM-Ring-Based LANs” to *May et al.* (“*May*”).

As to **claim 1**, see e.g., figure 5 which shows both a first and second ring transmitting in opposite directions and that contain a plurality of nodes. Node C acts as a detecting nodes which detects a failure (between Nodes B and C) and notifies the other nodes along the ring. A switch-over circuit is also shown e.g., in node B for figure 5, see e.g., bottom right-hand column on page 94.

As to **claim 2**, e.g., node B which performs the switch-over may also originate packets thus meeting the claim limitation. In addition, *new* paths are selected based on restoration, see e.g., bottom right-hand column of page 93 as well as defining two paths from every node to every node, see e.g., top left-hand column on page 94. Part of selecting the paths is to avoid closed loops such that new routes may be chosen, see e.g., top left-hand column on page 97. Also, generally the shortest path is selected between source and destination nodes, see middle right-hand column on page 91. Thus *new* routes are circuit switched using the shortest path while *current* routes may take a longer path such as the path shown in figure 11 (this distinction is not claimed by applicant and may also not be supported in applicant specification for current routes).

As to **claims 3-4**, see the loopback e.g., in figure 5.

As to **claim 5**, packets are routed based on a VPI/VCI pair and thus are routed based on a per flow basis.

As to **claim 6**, the QoS is monitored which takes into consideration congestion, see e.g., top left-hand column on page 97.

As to **claim 7**, different degrees of protection are enabled as part of the redundant link.

As to **claim 8**, see e.g., figures 5 and 11.

As to **claim 9**, notification messages are multicast messages that are sent to both rings, see e.g., right-hand column on page 96.

As to **claim 10**, “packet bleeding” is taught by dropping packets when switching to a particular ring such as restoring back to the primary ring, see e.g., top left-hand column on page 95.

As to **claim 11**, see similar rejection to claim 1.

As to **claim 12**, see similar rejection to claim 2.

As to **claim 13**, see similar rejection to claim 3.

As to **claim 14**, see similar rejection to claim 4.

As to **claim 15**, see similar rejection to claim 5.

As to **claim 16**, see similar rejection to claim 6.

As to **claim 17**, see similar rejection to claim 6.

As to **claim 18**, see similar rejection to claim 8.

As to **claim 19**, see similar rejection to claim 9.

As to **claim 20**, see similar rejection to claim 10.

4. **Claim 21** is rejected under 35 U.S.C. 102(b) as being anticipated by “Fault Tolerant Multiwavelength Optical Rings with Limited Wavelength Conversion” to *Gerstel et al.* (“*Gerstel*”).

Art Unit: 2663

As to **claim 21**, *Gerstel* teaches channel faults in section 2.1 starting on page 508 which teaches detecting a failure (e.g., a failed designated laser) and rerouting the channel to another channel (i.e., channels are different wavelengths or “a plurality of lambdas” on a single fiber as taught in section 1.2 on page 508). The WDM is a ring network and thus contains more than one node on a ring.

**Conclusion**

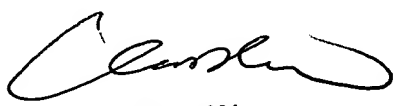
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derrick W. Ferris whose telephone number is (571) 272-3123. The examiner can normally be reached on M-F 9 A.M. - 4:30 P.M. E.S.T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Derrick W. Ferris  
Examiner  
Art Unit 2663

  
DWF

  
CHI PHAM  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600 9/13/04